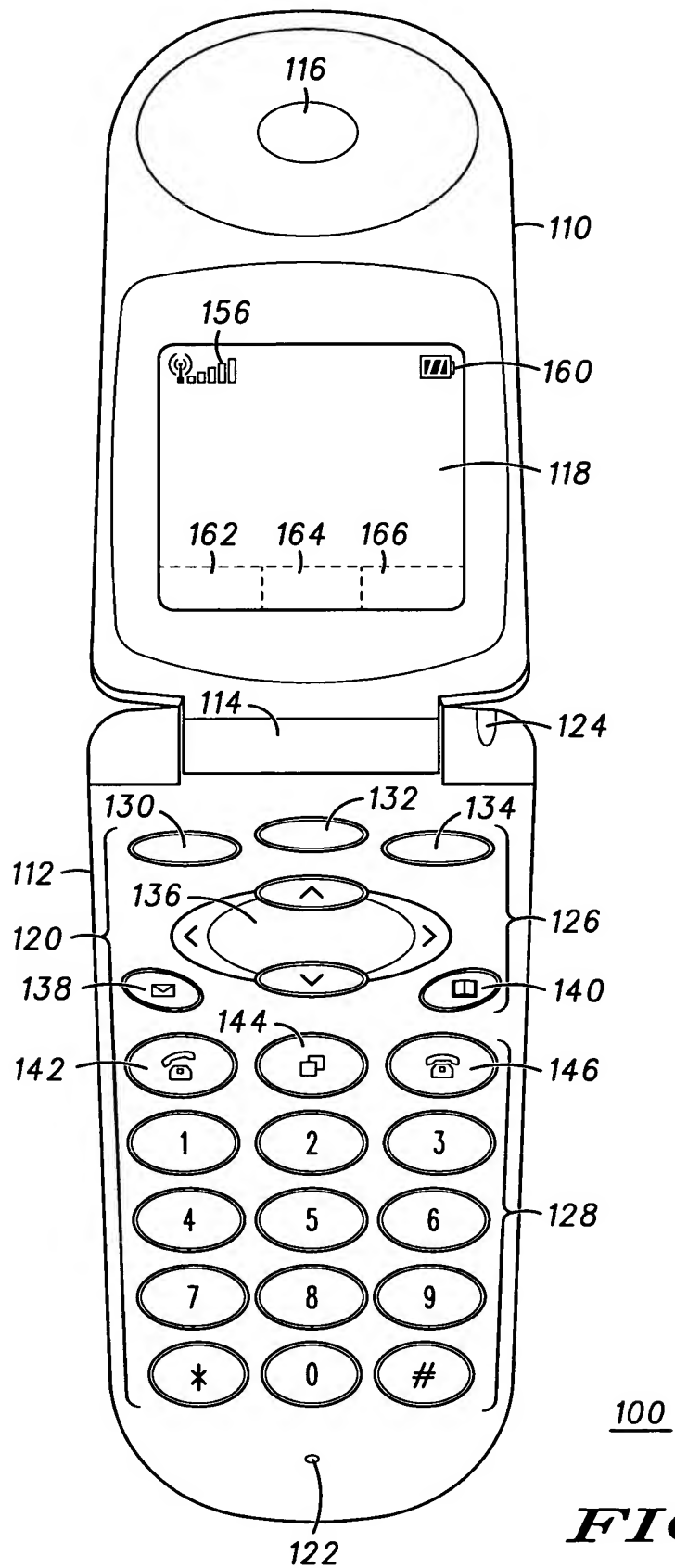


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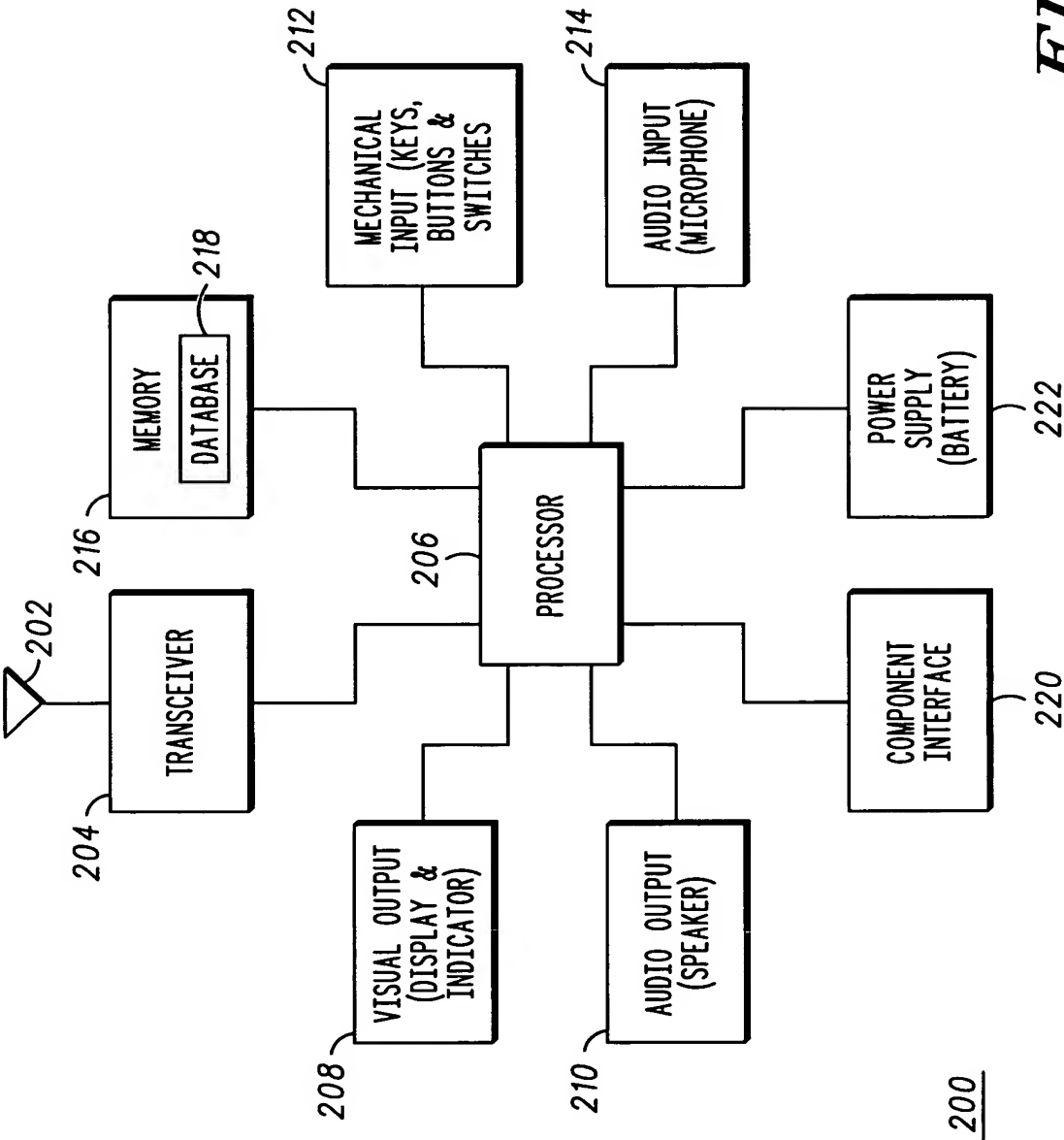


FIG. 2

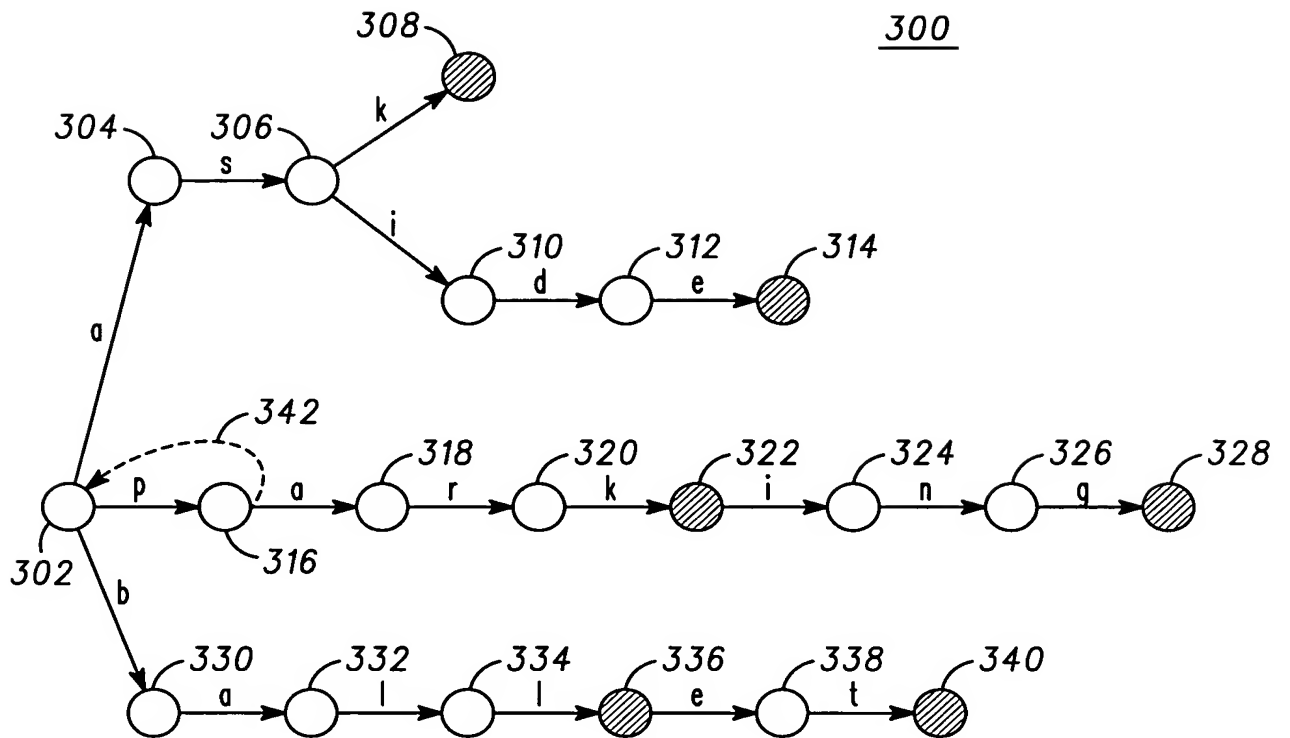


FIG. 3

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402 — PredictCombinations (dictionary, input)
 404 — 1. node[start] \leftarrow root[dictionary]
 406 — 2. timesReset[start] \leftarrow 0
 408 — 3. score[start] \leftarrow 0
 410 — 4. string[start] \leftarrow ""
 412 — 5. startNodes \leftarrow {start}
 414 — 6. i \leftarrow 1
 416 — 7. while i \leq length[input]
 418 — a. allowedTransitions \leftarrow ResolveMapping(input[i])
 420 — b. hypotheses \leftarrow \emptyset
 422 — c. foreach x in startNodes
 424 — i. hypotheses \leftarrow hypotheses \cup Move(x, allowedTransitions)
 426 — ii. ifIsComplete(x)
 428 — 1. node[temp] \leftarrow root[dictionary]
 429 — 2. string[temp] \leftarrow string[x]
 430 — 3. timesReset[temp] \leftarrow timesReset[x]+1
 432 — 4. score[temp] \leftarrow score[x] + Grade(node[x])
 434 — 5. hypotheses \leftarrow hypotheses \cup Move(temp, allowedTransitions)
 436 — d. startNodes \leftarrow hypotheses
 438 — 8. foreach y in startNodes
 440 — a. score[y] \leftarrow score[y] + Grade(node[y])
 442 — 9. return startNodes

400

FIG. 4

502 — Move(startNode, allowed Transitions)
 504 — 1. newNodes \leftarrow \emptyset
 506 — 2. foreach e in allowedTransitions
 508 — a. node[temp] \leftarrow δ (startNode, e)
 510 — b. timesReset[temp] \leftarrow timesReset[startNode]
 512 — c. score[temp] \leftarrow score[startNode]
 514 — d. string[temp] \leftarrow string[startNode]+e
 516 — e. newNodes \leftarrow newNodes \cup {temp}
 518 — 3. return newNodes

500

FIG. 5

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```
602 — if (a.numTimesReset != b.numTimesReset)
    604 — return (a.numTimesReset < b.numTimesReset);

606 — if (endOfInput)
    {
    608 — first=complete(a);
    610 — if (first != complete(b))
    612 — return first;
    }

614 — if (score[a] != score[b])
    {
    616 — return (score1 > score2);
    }
```

600

FIG. 6

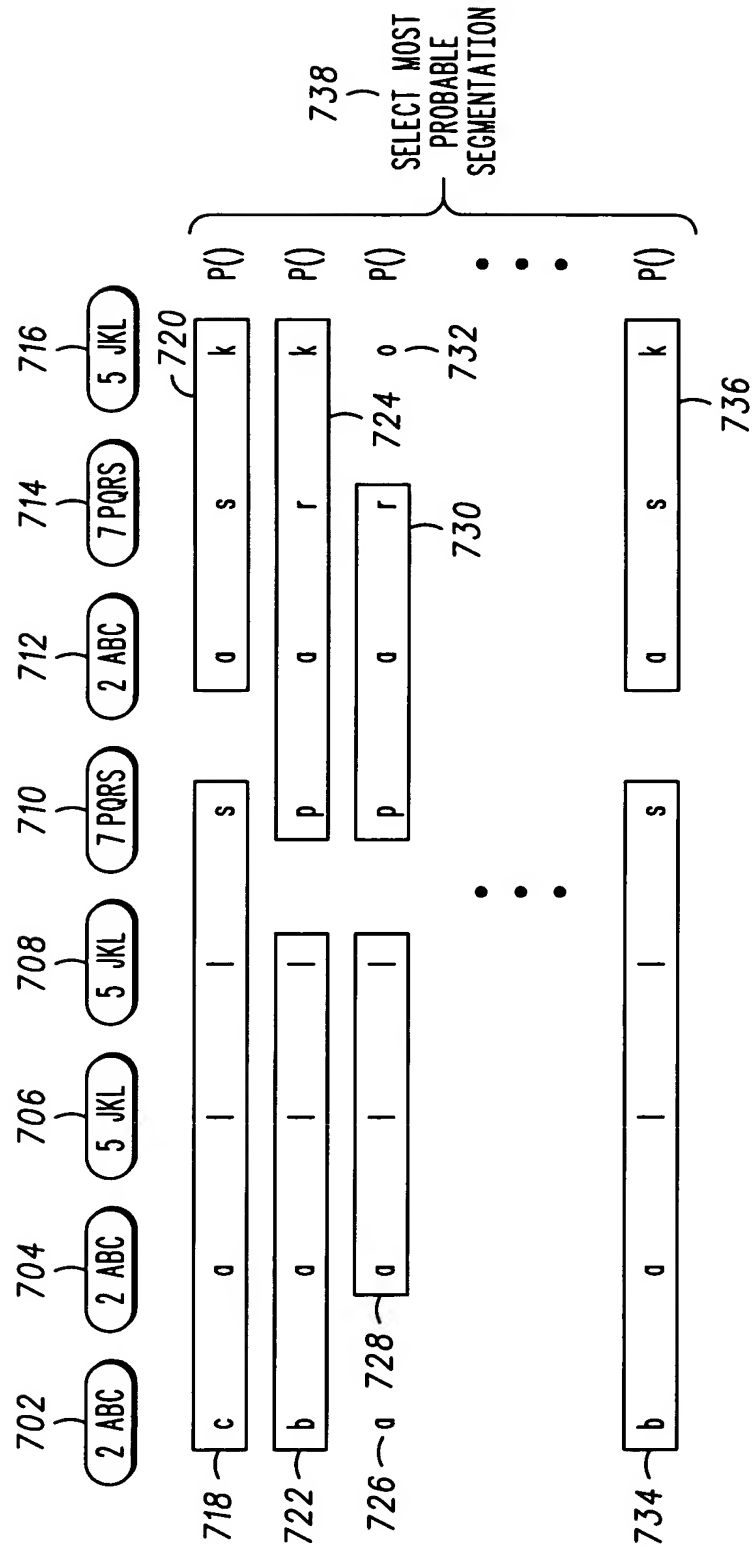


FIG. 7

802	804	806	808	810	812
WORD	CONSTITUENTS	SCORE (PROBABILITY)	RANK (SORT ORDER)	REASON FOR PLACEMENT	SAMPLE DICTIONARY
ballgame	ball game	$P(\text{ball}) + P(\text{game})$	1	well-formed, accumulative score of "ball" and "game" is higher than that of "call" and "hand"	ball game hand call all help 2u2 command code frantic classic
aallgame	a all game	$P(a) + P(\text{all}) + P(\text{game})$	3	worse than #1 and #2 in structure	
ballhcof	ball h co f	$P(\text{ball}) + P(h) + P(\text{co}) + P(f)$	4	worse than all others in structure	
Callhand	call hand	$P(\text{call}) + P(\text{hand})$	2	well-formed, accumulative score of "ball" and "game" is lower than that of "call" and "hand"	

FIG. 8